

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
10 November 2005 (10.11.2005)

PCT

(10) International Publication Number  
**WO 2005/106589 A1**

(51) International Patent Classification<sup>7</sup>: **G03F 7/20**

(72) Inventor; and

(21) International Application Number:  
PCT/EP2004/014728

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(22) International Filing Date:  
27 December 2004 (27.12.2004)

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(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/568,006 4 May 2004 (04.05.2004) US  
60/612,823 24 September 2004 (24.09.2004) US

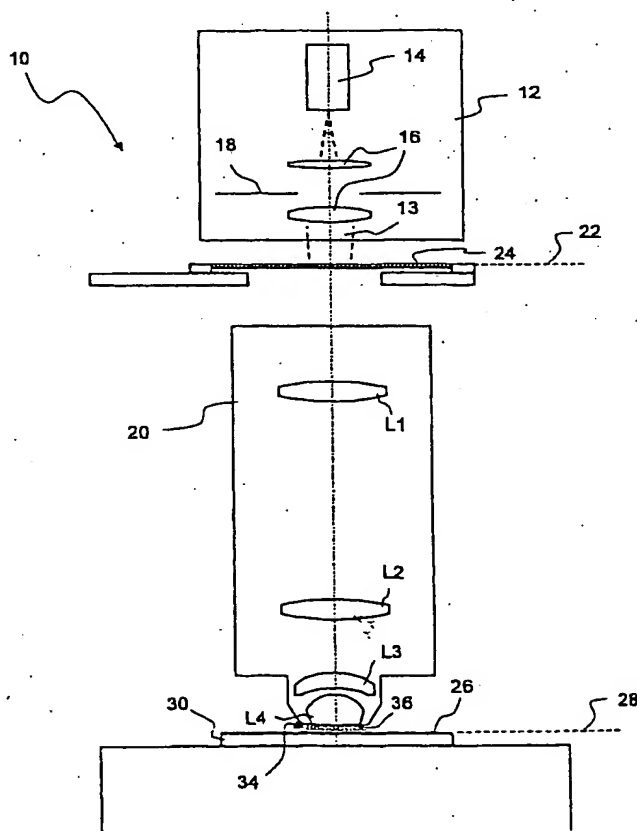
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: MICROLITHOGRAPHIC PROJECTION EXPOSURE APPARATUS AND IMMERSION LIQUID THEREFORE



(57) Abstract: An immersion liquid for a microlithographic projection exposure apparatus is enriched with heavy isotopes. This reduces the chemical reactivity, which leads to an extension of the lifetime of optical elements which come in contact with the immersion liquid. For example, heavy water (D<sub>2</sub>O), deuterated sulfuric acid, (D<sub>2</sub>SO<sub>4</sub>) or deuterated phosphoric acid D<sub>3</sub>P<sup>16</sup>O<sub>4</sub> may be used. Organic compounds such as perfluoro polyethers, which have been deuterated or enriched with heavy oxygen (<sup>18</sup>O), are furthermore suitable.



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— *with international search report*

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— *of inventorship (Rule 4.17(iv)) for US only*